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ABSTRACT

For the fall 1987 semester, New York City's Board of Education modified the admissions policy for the educational options high schools in order to enhance the equity of opportunity to the desirable programs in these schools and to make the schools more accessible to at-risk students. Of the 17,236 students in educational options schools and programs, 56.8 percent (9,791) were randomly assigned to their school or program, and 43.2 percent (7,445) were selected by their school or program. Analysis of the data on these students leads to the following conclusions: (1) approximately two-thirds of all students admitted were ninth-graders; (2) over 80 percent of both selected and randomly assigned students were admitted to a school or program in the borough in which they lived; (3) there were few differences in the percentage of males and females admitted; (4) a student's program choice was based more on the probability of obtaining a job with a career path than on pursuing further education; (5) both the reading and mathematics skills of the randomly assigned students were substantially lower than those of the selected students, both in the final year of middle school and the first semester in high school; (6) the randomly assigned students had a poorer attendance pattern than the selected students, and earned fewer credits; (7) the change in policy has increased the diversity of the entering student population with respect to middle-school achievement and attendance. Data are presented on ten tables. (BJV)

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OREA Report

EVALUATION SECTION REPORT

EDUCATIONAL OPTIONS HIGH SCHOOLS

ADMISSIONS POLICY STUDY

September 1988

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September 1988

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EDUCATIONAL OPTIONS HIGH SCHOOLS
ADMISSIONS POLICY STUDY

INTRODUCTION

For the fall 1987 semester, the Board of Education modified the admissions policy for the educational options high schools. The Division of High Schools (D.H.S.) implemented the modifications. The modified policy was designed to enhance the equity of opportunity for admissions to the desirable programs in these schools and to make the schools more accessible to a greater number of "at risk" students. Educational options high schools have programs in a wide range of areas such as business administration, finance, hotel/restaurant management, mathematics/science, graphic communications arts, telecommunications, art, medical technology, automotive mechanics and repair, aviation, and food technology. Any eighth- or ninth-grade, district elementary- or middle-school student may apply to an educational options high school or program. Ninth-grade high school students may apply, as well, for admission to tenth grade in an educational options program or school. Application is made to the desired school and program by November of the year preceding admission. Students may apply to as many as eight different schools or programs. However, students are asked to indicate the order of their preferences. Some schools and programs take these preferences into account in making their admissions decisions.

Educational options high schools select students for their entering classes on the basis of reading test scores. Prior to the 1987-88 school year, the schools themselves selected students from the applicant pool with the stipulation that the selected populations would have at least one-fourth of their students reading below grade, no more than one-fourth reading above grade level, and 50 percent reading on grade level.

For the 1987-88 school year, the admissions policy was changed: one-half of the entering class was to be selected by the school or program, and one-half was to be selected randomly from all applicants to that particular school or program. The school selections and random assignments were to be conducted so that the entering class would be comprised of 16 percent below-average readers, 16 percent above-average readers, and 68 percent average readers, based upon the results of the annual administration of the Degrees of Reading Power test. Students scoring in the top two percent of all test takers are guaranteed a seat in the school or program that they indicated as their first choice.

In addition to increasing the availability of opportunities to educational options schools and programs, the change in the admissions policies was expected to make the educational options high schools more accessible to "at risk" students. An attendant concern was that some of the randomly assigned students might not be as academically or socially prepared to succeed in these programs as their selected counterparts. The Director of

High Schools asked the Office of Educational Assessment (O.E.A.) to conduct a study to examine these two issues.

Prior to this report, O.E.A. released two reports that presented early findings of the study. These findings indicated that the classes entering educational options schools and programs in 1986 and 1987 were very similar in terms of gender distribution and percentage of overage students. However, the class of 1987 had a slightly lower junior high school grade average and attendance rate, but a considerably higher percentage of students reading above grade level than the class of 1986. The latter finding was somewhat unexpected, and may be partially attributable to a change in reading tests prior to the 1986-87 school year.

The earlier reports also indicated that randomly selected students were lower on several measures (average junior high school grades, percentage above grade level in reading, and attendance) than selected students, and included more males and more students who were overage for their grade. This report presents new findings based on the analysis of additional data collected on the entering class of 1987. It focuses primarily on a comparison examination of the performance of randomly assigned and selected students during their first semester (fall 1987) in their educational options program, but also provides additional information on the characteristics of the entering class of 1987.

EVALUATION QUESTIONS

The major evaluation question addressed in this report is:

- Are randomly assigned educational options students performing as well as selected educational options students in their first semester of high school?

In order to respond to this question, O.E.A. examined the differences between the randomly assigned and the selected students on the following indicators:

- number of total credits earned during the fall 1987 semester;
- number of credits earned towards high school graduation during the fall 1987 semester; and
- attendance during the fall 1987 semester.

The report also addresses issues relating to the diversity of the educational options high school student bodies as a whole. This information includes students' borough of residence and their performance on the citywide mathematics test in the year prior to admission to the educational options school or program. Finally, the report also analyzes the percentage of students who attended the educational options high school to which they were admitted, and the reasons why some students did not attend the program to which they were admitted.

METHODOLOGY

For the 1987-88 school year, the admissions process for educational options high schools and programs was administered by the Educational Testing Service (E.T.S.). E.T.S. produced a tape containing data for all students admitted to educational options high schools in fall 1987. The Office of Educational

Data Services (O.E.D.S.) then constructed an analytic tape used by O.E.A. for this study, using the E.T.S. tape as its starting point. Based on preliminary analyses conducted by O.E.D.S., the E.T.S. tape contained records for 17,236 students in educational options schools and programs. Of these students, 9,791 (56.8 percent) were randomly assigned to their school or program and 7,445 (43.2 percent) were selected by their school or program. According to O.H.S., the difference in percentages between the random and selected students was due to two factors. First, there was a higher rate of decline among a school's selected students due to different schools selecting the same applicant. Second, in some cases, schools had fewer applicants than available seats, resulting in all applicants being accepted. Since there was no selection process, all of these students were considered part of the random assignment group.

The Office of Educational Data Services added information from the Biofile (a computerized student information system) and student attendance data files to the E.T.S. tape to produce an analytic data file. Academic data were supplied separately by the University Applications Processing Center (U.A.P.C.) and Columbia Computer System (C.C.S.) for schools using these automated student information systems. Academic data from the non-automated high schools were obtained directly from those schools by O.E.D.S. The result was a single database containing all of the above information for each student admitted to an educational options school or program in fall 1987.

RESULTS

Additional Student Profile Information

As mentioned above, previous O.E.A. reports indicated that randomly assigned students included more males and more students who were overage for their grade, and had lower junior high school grades, lower attendance, and fewer students reading above grade level than selected students. In the present study, O.E.A. provides additional information on the randomly assigned and selected students to address the issue of the diversity of students admitted to the educational options schools. Table 1 indicates the grade to which students were admitted in fall, 1987. As these results indicate, approximately two-thirds of the students in both the randomly assigned and selected groups were admitted to their educational options school or program as ninth-graders. The remaining one-third were students already in the ninth grade who were admitted to the educational options school or program for the tenth grade.

TABLE 1

Distribution of Grade to Which Educational Options Students Were Admitted in Fall 1987 by Selection Method

Grade to Which Student Was Admitted	Selection Method: Randomly Assigned Students (N = 9,790)	Selection Method: Selected Students (N = 7,446)	Total (N =17,236)
Grade 9	63.1%	63.3%	63.2%
Grade 10	36.9	36.7	36.8
Total	100.0	100.0	100.0

Previous O.E.A. studies indicated that the reading achievement of the randomly assigned students was considerably lower than that of selected students. Analyses of the performance of these students on the citywide mathematics examination revealed a similar pattern. The Metropolitan Achievement Test (MAT) was administered citywide in spring 1987 to students in grades two through eight. As shown in Table 2, there was a substantial difference in the mathematics achievement scores of the randomly assigned and selected students, with the latter group clearly outperforming the former. In addition to the large differences in average percentile scores, only 36 percent of the randomly

TABLE 2

MAT Scores for Students Admitted to Educational Options Programs in Fall 1987 by Selection Method

Mathematics Score (in Percentiles)	Selection Method: Randomly Assigned Students N	%	Selected Students N	%
1 - 25	2,744	35.3	1,510	26.6
26 - 49	2,377	30.5	1,427	25.1
50 - 75	1,582	20.3	1,492	26.2
76 - 99	1,080	13.9	1,259	22.1
Total	7,783	100.0	5,688	100.0
Missing Data	592		569	

Note: The mean percentile on the mathematics examination was 39.3 for the randomly assigned students and 67.1 for the selected students.

assigned students had mathematics skills at or above grade level, as compared to almost 50 percent of the selected students.

O.E.A. examined the percentage of educational options students who attended the school or program to which they accepted admission. These results, found in Table 3, indicate that only slightly more than ten percent of the students did not attend their final-choice educational options school. (The final-choice school is the educational options school or program to which the student accepted admission.) Furthermore, only about two percent of both the randomly assigned and selected students did not attend a New York City public school in fall 1987, educational options or otherwise.

TABLE 3

Percent of Educational Options Students Attending Their Selected School in Fall 1987 by Selection Method

Attendance Category	Selection Method	
	Randomly Assigned Students (N = 9,790)	Selected Students (N = 7,666)
Did Not Attend a N.Y.C. Public School	1.9%	2.5%
Did Not Attend Selected School	11.6	12.5
Attended Selected School	86.5	85.0
Total	100.0%	100.0%

Table 4 indicates the reasons why students who were offered a place in an educational options program or school did not attend. As these results show, about 86 percent of both the randomly assigned and selected students chose to attend another New York City public school rather than enter an educational options school or program to which they had been admitted.

TABLE 4

Reason New Educational Options Students Did Not Attend Their Selected School in Fall 1987 by Selection Method

Reason for Not Attending	Selection Method: Randomly Assigned Students (N = 1,130)	Selection Method: Selected Students (N = 925)
Admitted to Another N.Y.C. Public School	86.0%	86.4%
Removal from N.Y.C.	5.3	4.7
Graduated	0.0	0.4
Admitted to Parochial or Private School	4.8	5.7
Dropped Out	2.8	1.8
Discharged for Other Reason*	1.1	1.0
Total	100.0%	100.0%

*Includes confirmed admissions to Auxiliary Services for the high schools.

O.E.A. next examined whether there was any relationship between a student's final choice school and the borough in which that student lived. The results, found in Table 5, indicate that the final-choice school for over 80 percent of the educational options students in both groups was in the borough where they lived.

TABLE 5

Percent of Fall 1987, Educational Options Students Admitted to a School in Their Borough of Residence, by Selection Method

	Selection Method	
Category	Randomly Assigned Students (N = 9,790)	Selected Students (N = 7,446)
Final-Choice School in Borough of Residence	82.4%	83.2%
Final-Choice School Not in Borough of Residence	17.6	16.8
Total	100.0%	100.0%

Table 6 indicates the percent of educational options students, by gender, in the various programs offered. As the table shows, there were relatively few educational options programs in which the difference between males and females was large. Of these programs, more males than females chose computer science, and more females than males chose cosmetology, health and medical sciences, nursing, and secretarial sciences.

TABLE 6

Percent of Students in Educational Options Programs, by Gender

Educational Options Program	Females		Males	
	N	%	N	%
Aviation/Automotive	39	0.4%	435	6.1%
Business[a]	1,936	19.3	1,278	17.8
Communications/Telecommunications	690	6.9	588	8.2
Computer Science	878	8.7	1,237	17.2
Cosmetology	336	3.3	37	0.5
Education	72	0.7	7	0.1
Experimental School	578	5.7	328	4.6
Health & Medical Sciences	1,416	14.1	529	7.4
Law/Politics	755	7.5	445	6.2
Nursing	461	4.6	12	0.2
Oceanography	64	0.6	142	2.0
Performing & Fine Arts	602	6.0	349	4.9
Physical Education/Sports	81	0.8	225	3.1
Public Service	52	0.5	84	1.2
Science/Math/Engineering	376	3.7	214	3.0
Secretarial Sciences	521	5.2	10	0.1
Special Education	656	6.5	944	13.1
Veterinary Sciences & Animal Care	147	1.5	136	1.9
Other[b]	394	3.9	181	2.5
Total	10,054	100.0%	7,181	100.0%

[a]Includes business, finance, accounting, marketing, and administration and management.

[b]Includes Creative Writing, Model Urban School, Humanities, Foreign Language Institute, Great Books Institute, International Studies, and Intensive Academic Programs.

The difference between males and females in the special education programs was due more to the larger percentage of males referred to special education than to specific choices made by students. Finally, the results in Table 6 suggest that the selection of an educational options program appeared to be based more on the probability that the student will be able to obtain a good job than on future educational attainment.

First-Semester Performance

Table 7 shows the attendance of educational options students during their first semester in their educational options program. Only students found to be attending an

TABLE 7

Attendance of Students Admitted to Educational Options Programs in Fall 1987, by Selection Method

Number of Days Absent	Selection Method	
	Randomly Assigned Students (N=8,904)	Selected Students (N=6,755)
0 - 5 days	42.6%	55.6%
6 - 10 days	21.5	19.8
11 - 20 days	18.0	13.6
21 - 30 days	7.6	4.8
Over 30 days	10.3	6.2
Total	100.0%	100.0%

Note: The average number of days absent during the fall 1987 semester was 12.1 days for the randomly assigned students and 8.9 days for the selected students.

educational options school or program during the fall 1987 term were included in these analyses.

As the results in Table 7 indicate, the randomly assigned students were absent more frequently than the selected students during the fall 1987 semester. Further, over half of the selected students were absent five or fewer days during the fall 1987 semester, compared to only 43 percent of the randomly assigned students. In the previous O.E.A. study, it was noted that one of the major differences between the randomly assigned and selected students was that the randomly assigned students were absent more frequently during the 1986-87 school year.

The Office of Educational Assessment also examined the fall 1987 academic records of the educational options students. These results, found in Tables 8 and 9, are based on data received from U.A.P.C. and C.C.S. The differences in record-keeping procedures between these two systems and the differences in credit-granting policies among the high schools using each system affect, among other things, the number of credits students need to be promoted from one grade to the next, the number of credits received for courses, and the scheduling of courses. These differences, however, would be expected to affect both the randomly assigned and selected students equally, thus negating potential problems in interpreting the results. Furthermore, students could have obtained accelerated credits for work completed prior to entering high school which would be counted as credits earned in fall 1987. Given the way the data

sets were constructed, it was not possible to determine whether students in one of these two groups entered high school with more accelerated credits than the other.

In addition, a number of high schools are organized on a cycle rather than a semester basis. In these schools, students can earn five or more credits in a cycle, resulting in ten or more credits in a semester. Credit accumulation in these schools is not comparable to credit accumulation in schools organized on a semester basis. Therefore, O.E.A. removed the cycle schools from the credit analyses. Appendix A contains information about the number of credits students earned in educational options programs for each educational options school.

As Table 8 indicates, randomly assigned students received, on average, about seventh-tenths of a credit less than selected students during the fall 1987 semester. The distribution of credits also showed this difference. As can be seen in Table 8, approximately 25 percent of the randomly assigned students received fewer than three credits during the fall 1987 semester, compared to approximately 15 percent of the selected students. Similarly, about 30 percent of the randomly assigned students received six or more credits during the fall 1987 semester, compared to more than 45 percent of the selected students.

TABLE 8

Number of Credits Earned in Fall 1987
by Selection Method

Number of Credits Earned	Selection Method			
	Randomly Assigned Students		Selected Students	
	N	%	N	%
0 - 0.9	539	8.0	220	4.5
1.0 - 1.9	551	8.2	205	4.2
2.0 - 2.9	560	8.4	293	6.0
3.0 - 3.9	742	11.1	359	7.3
4.0 - 4.9	967	14.4	607	12.3
5.0 - 5.9	1,252	18.7	965	19.6
6.0 - 6.9	1,592	23.7	1,686	34.3
7.0 - 7.9	412	6.1	490	10.0
8.0 - 8.9	39	0.6	54	1.1
9 or more	53	0.8	35	0.7
Total	6,707	100.0%	4,914	100.0%

Note 1: The average number of credits earned for the fall 1987 semester was 4.1 for the randomly assigned students and 4.8 for the selected students.

Note 2: The following schools were omitted from the above analysis because they are organized on a cycle rather than a semester basis: Hillcrest, Beach Channel, August Martin, Edward R. Murrow, and John Dewey. The D.A.T.A. Office of the Division of High Schools provided information about which schools were organized on a cycle basis.

TABLE 9

Number of Credits Earned Towards Graduation
in Fall 1987 by Selection Method

Number of Credits Earned Toward Graduation	Selection Method			
	Randomly Assigned Students		Selected Students	
	N	%	N	%
0 - 0.9	561	8.4	236	4.8
1.0 - 1.9	554	8.2	214	4.4
2.0 - 2.9	559	8.3	290	5.9
3.0 - 3.9	751	11.2	371	7.5
4.0 - 4.9	985	14.7	605	12.3
5.0 - 5.9	1,239	18.5	963	19.6
6.0 - 6.9	1,564	23.3	1,674	34.1
7.0 - 7.9	404	6.0	479	9.7
8.0 - 8.9	38	0.6	53	1.1
9 or more	52	0.8	29	0.6
Total	6,707	100.0%	4,914	100.0%

Note 1: The average number of credits earned towards graduation was 4.1 credits for the randomly assigned students and 4.8 credits for the selected students.

Note 2: The following schools were omitted from the above analysis because they are organized on a cycle rather than a semester basis: Hillcrest, Beach Channel, August Martin, Edward R. Murrow, and John Dewey. The D.A.T.A. Office of the Division of High Schools provided information about which schools were organized on a cycle basis.

The credits received during the fall 1987 semester, however, are not all credits earned towards high school graduation. The number of credits earned towards high school graduation is presented in Table 9.

The difference between the number of credits earned by a student and the number of credits earned toward graduation is due to the fact that students often take courses that are not credit bearing, such as remedial English, remedial mathematics, or physical education, and others that are credit-bearing but do not count toward high school graduation, such as electives.

As the results in Table 9 indicate, the randomly assigned students earned, on average, fewer credits toward graduation than did the selected students. The differences in the distribution of credits earned toward graduation were approximately the same as the distribution of the number of credits received during the fall 1987 semester. It should be remembered, however, that differences in credit accumulation between the randomly assigned and selected groups may be due in part to differences in credits obtained before entering high school, either because they received high school credits in a middle school or through accelerated credit programs.

DISCUSSION AND CONCLUSIONS

Analysis of the data on fall 1987 incoming students to the educational options programs and schools leads to the following conclusions:

- Approximately two-thirds of all students admitted to the educational options programs were ninth-graders.
- Over 80 percent of both selected and randomly assigned students were admitted to an educational options program or school in the borough in which they lived.
- Few educational options programs showed large differences between the percent of males and females admitted. Furthermore, a student's choice of program seemed to be based more on the probability of obtaining a job with a career path than on pursuing further education.
- Upon entrance into high school, both the reading and mathematics skills of the randomly assigned students, as measured by citywide achievement tests, are substantially lower than those of the selected students. This suggests that administrators should be alert to potential academic problems in the performance of randomly assigned students.
- The poorer attendance pattern of the randomly assigned students, observed during the year prior to admission to the program or school, continued during the first semester of high school.
- The randomly assigned students earned fewer credits than the selected students during the fall 1987 semester. Further, the randomly assigned students earned fewer credits toward graduation than the selected students during the fall 1987 semester.

Preliminary findings show that the change in policy has increased the diversity of the entering student population with respect to middle-school achievement and attendance. In the final year of middle school, the randomly selected students had lower average scores on standardized tests of reading and mathematics and lower average attendance than the selected students.

These differences continued to be demonstrated after the first semester in high school. OREA will continue this study in an attempt to assess the relative success of the randomly admitted students and the efficacy of the new admissions policy.

Table A-1

Credits Earned in the Fall, 1987 Semester for
Students in Educational Options Programs
By School

School	Number of Credits					Total N
	% 0-3	% 4-6	% 7-8	% 9-10	% >10	
Manhattan						
A. Philip Randolph	18.9	20.0	52.6	7.4	1.1	95
George Washington	43.2	45.2	10.6	0.0	1.0	199
Julia Richman	33.3	28.3	37.2	0.5	0.7	414
Louis D. Brandeis	21.4	28.6	50.0	0.0	0.0	14
Murry Bergtraum	20.2	30.2	49.1	0.3	0.1	698
Norman Thomas	29.8	29.3	40.4	0.4	0.0	675
Park West	29.0	36.2	30.0	2.8	2.0	639
Seward Park	27.9	33.7	37.2	0.0	1.2	86
Washington Irving	41.2	30.3	26.6	1.2	0.8	515
Bronx						
Adlai E. Stevenson	34.2	40.4	24.6	0.9	0.0	114
Christopher Columbus	30.7	43.0	26.3	0.0	0.0	114
Dewitt Clinton	42.1	43.1	14.8	0.0	0.0	216
Evander Childs	55.1	36.2	8.7	0.0	0.0	127
Harry S. Truman	37.7	35.5	26.8	0.0	0.0	310
Herbert H. Lehman	22.1	36.4	41.6	0.0	0.0	77
James Monroe	54.8	28.2	16.9	0.0	0.0	124
Morris	31.3	22.4	43.3	3.0	0.0	67
South Bronx	21.6	41.9	35.1	1.4	0.0	74
Theodore Roosevelt	34.6	43.9	21.5	0.0	0.0	107
Walton	48.3	31.0	20.4	0.3	0.0	686
William H. Taft	44.8	32.8	22.4	0.0	0.0	58
Brooklyn						
Abraham Lincoln	25.0	29.4	44.5	0.8	0.2	476
Boys and Girls	26.1	30.0	42.9	0.0	1.0	203
Bushwick	31.0	41.4	25.9	0.0	1.7	58
Canarsie	39.1	25.2	34.8	0.0	0.9	115
Clara Barton	31.5	51.8	15.9	0.2	0.6	533
Edward R. Murrow	2.2	1.2	75.7	20.1	0.8	827
Franklin D. Roosevelt	24.7	17.5	57.1	0.0	0.6	154
James Madison	27.2	21.3	37.1	10.4	4.0	202
John Dewey	1.7	0.8	2.1	0.9	94.4	843
John Jay	33.2	22.9	42.1	0.9	0.9	349
Lafayette	24.8	36.3	37.8	0.3	0.9	339
Midwood	19.6	37.5	42.9	0.0	0.0	112
Paul Robeson	28.0	40.3	31.1	0.3	0.3	293
Samuel J. Tilden	33.8	30.3	34.8	0.0	1.0	198
Sarah J. Hale	35.5	42.2	20.5	0.9	0.9	332
Sheepshead Bay	28.2	24.3	46.3	0.6	0.6	177
Telecommunications	18.3	69.7	8.4	0.8	2.8	251

Table A-1 (cont'd.)

School	Number of Credits % 0-3	% 4-6	% 7-8	% 9-10	% >10	Total N
Queens						
Andrew Jackson	28.6	71.4	0.0	0.0	0.0	7
August Martin	13.3	8.8	14.2	13.3	50.5	535
Bayside	29.0	32.4	37.3	1.2	0.0	241
Beach Channel*	18.2	10.0	14.7	13.5	43.7	341
Benjamin Cardozo	13.1	21.0	64.3	1.0	0.7	305
Far Rockaway	17.6	37.3	41.2	2.0	2.0	102
Flushing	23.5	40.0	35.3	1.2	0.0	85
Forest Hills	16.0	24.0	60.0	0.0	0.0	125
Francis Lewis	24.7	32.5	38.5	3.9	0.4	231
Grover Cleveland	16.8	29.0	54.2	0.0	0.0	131
Hillcrest	12.8	13.7	12.8	9.3	51.3	226
Jamaica	20.2	25.5	53.7	0.5	0.0	188
John Bowne	19.0	34.9	46.0	0.0	0.0	63
John Adams	17.4	45.7	37.0	0.0	0.0	92
Long Island City	29.9	21.5	47.7	0.9	0.0	107
Martin Van Buren	20.8	30.9	48.3	0.0	0.0	207
Newtown	14.3	26.8	57.1	1.8	0.0	56
Richmond Hill	26.2	27.5	45.6	0.7	0.0	149
Springfield Gardens	32.8	37.4	27.3	0.5	2.0	198
William C. Bryant	7.5	26.3	64.7	1.5	0.0	133

*Cycle School: Credit allocation is based on cycles of academic terms, of which there are more than one in a semester. Students in cycle schools earn more credits than students in non-cycle schools. Therefore, a direct comparison in the number of credits earned, between cycle and non-cycle schools, is not possible.